Cotton/Soybean Insect Newsletter

Volume 13, Issue #13 Edisto Research & Education Center in Blackville, SC 27 July 2018

Pest Patrol Alerts

The information contained herein each week is available via text alerts that direct users to online recordings. I will update the short message weekly for at least as long as the newsletter runs. After a new message is posted, a text message is sent to alert users that I have recorded a new update. Users can subscribe for text message alerts for my updates in two easy steps. Step one: register by texting **pestpat7** to 97063. Step two: reply to the confirmation text you receive by texting the letter "y" to complete your registration. Pest Patrol Alerts are sponsored by Syngenta.

Updates on Twitter

When noteworthy events happen the in the field, I will be sending them out quickly via Twitter. If you want to follow those quick updates, follow me at @bugdocisin on Twitter.

News from Around the State

Marion Barnes, county agent in Colleton County, reported sub-threshold numbers of kudzu bugs in soybean…nothing to treat, but they are there. **Mitch Binnarr**, representative with Corteva Agriscience, took this cool photo late last week of stink bugs he found under the edge of a pecan tree next to a cotton field that was sprayed for stink bugs. This illustrates the mobility of adult stink bugs back and forth from host to host. Stink bugs are abundant early this year.

Scouting Workshops (2nd one on 31 July!)

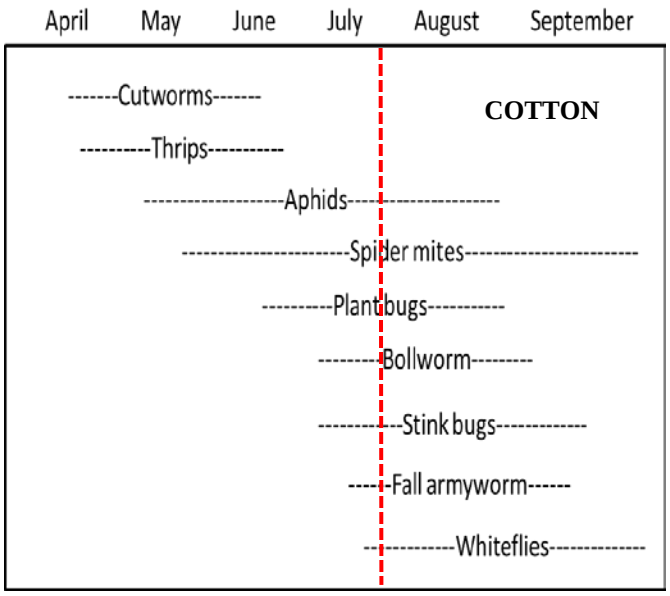
Your ag-focused county agents and I will be offering two more **in-field scouting workshops** for cotton and soybean insects this summer. The interactive workshops will be held:

1. ~~18 July in Cameron, SC~~ (was a big success, thanks to Jonathan Croft and Charles Davis)
2. 31 July in Lake City, SC (please RSVP with Hannah Mikell [hmikell@clemson.edu] or 803-435-8429, so we can plan for lunch)
3. 7 August at the Edisto REC near Blackville, SC (again, so we can plan for lunch, please RSVP with either me [greene4@clemson.edu], Mary Katherine Bamberg [mbamber@clemson.edu], Joe Varn [jvarn@clemson.edu], or Marion Barnes [jbrns@clemson.edu]).

The trainings will be free to attend, start in the morning, and end with lunch. See detailed agenda.

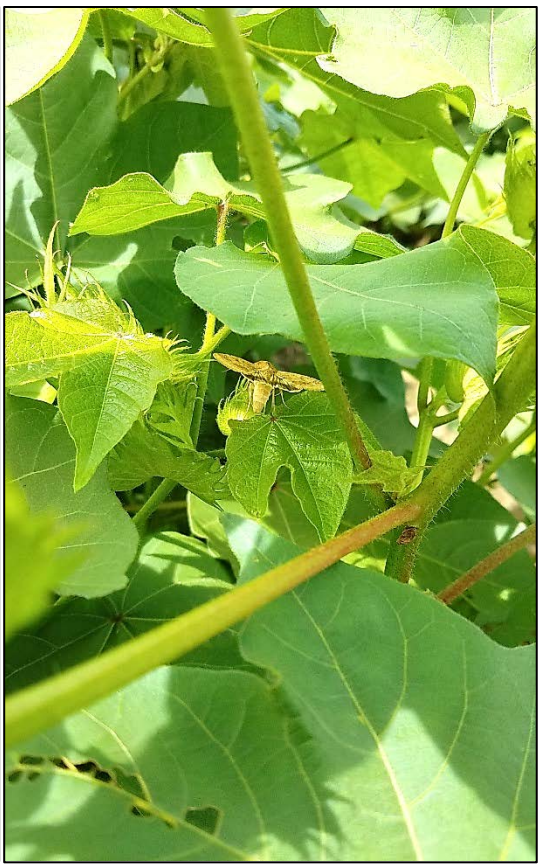
Cotton Situation

As of 22 July 2018, the USDA NASS South Carolina Statistical Office estimated that about 75% of the crop is squaring, compared with 63% the previous week, 80% at this time last year, and 81% for the 5-year average. About 41% of the crop is setting bolls, compared with 21% the previous week, 50% at this time last year, and 44% for the 5-year average. The condition of the crop was described as 15% excellent, 63% good, 17% fair, 5% poor, and 0% very poor. These are observed/perceived state-wide averages.



Cotton Insects

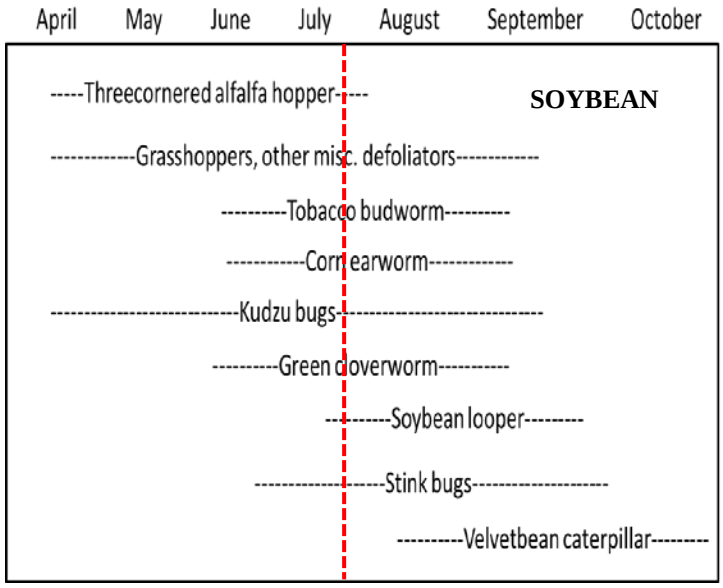
I received no reports of aphids this week, so, hopefully, that problem has become less of, well, a problem. Spider mites could still become an issue in some fields from now to the end of the season, so keep your hand lens handy when you go scouting. Bollworm moths are definitely noticeable now. I caught this one down in the canopy hiding from the sun, laying eggs, etc. Look for eggs and pay attention to any pheromone trapping data in your area that might indicate proportions of TBW or bollworm. Eggs should be counted on the top 20% of the plant and around each bloom. Look for larvae in terminals, squares, blooms, on top of bolls under bloom tags, and on the sides of bolls. Look for injured squares, blooms, and bolls. Use our thresholds.



Stink bugs are numerous now and will likely be a significant issue for us in cotton from here until the end of the insect season in the crop. Egg masses (one from southern green stink bug pictured here) are not too difficult to find, and boll damage is certainly variable. I just checked a field of mine, and boll injury (internal injury pictured here) was running about 50%, so I am way over threshold and will be putting out an efficacy trial there next week. One of the bolls I grabbed to check had a stink bug on it, so they are numerous right now. Use our dynamic boll-injury threshold for stink bugs. See the newsletter from last week for more details on that or check it out in our Pest Management Handbook.

Soybean Situation

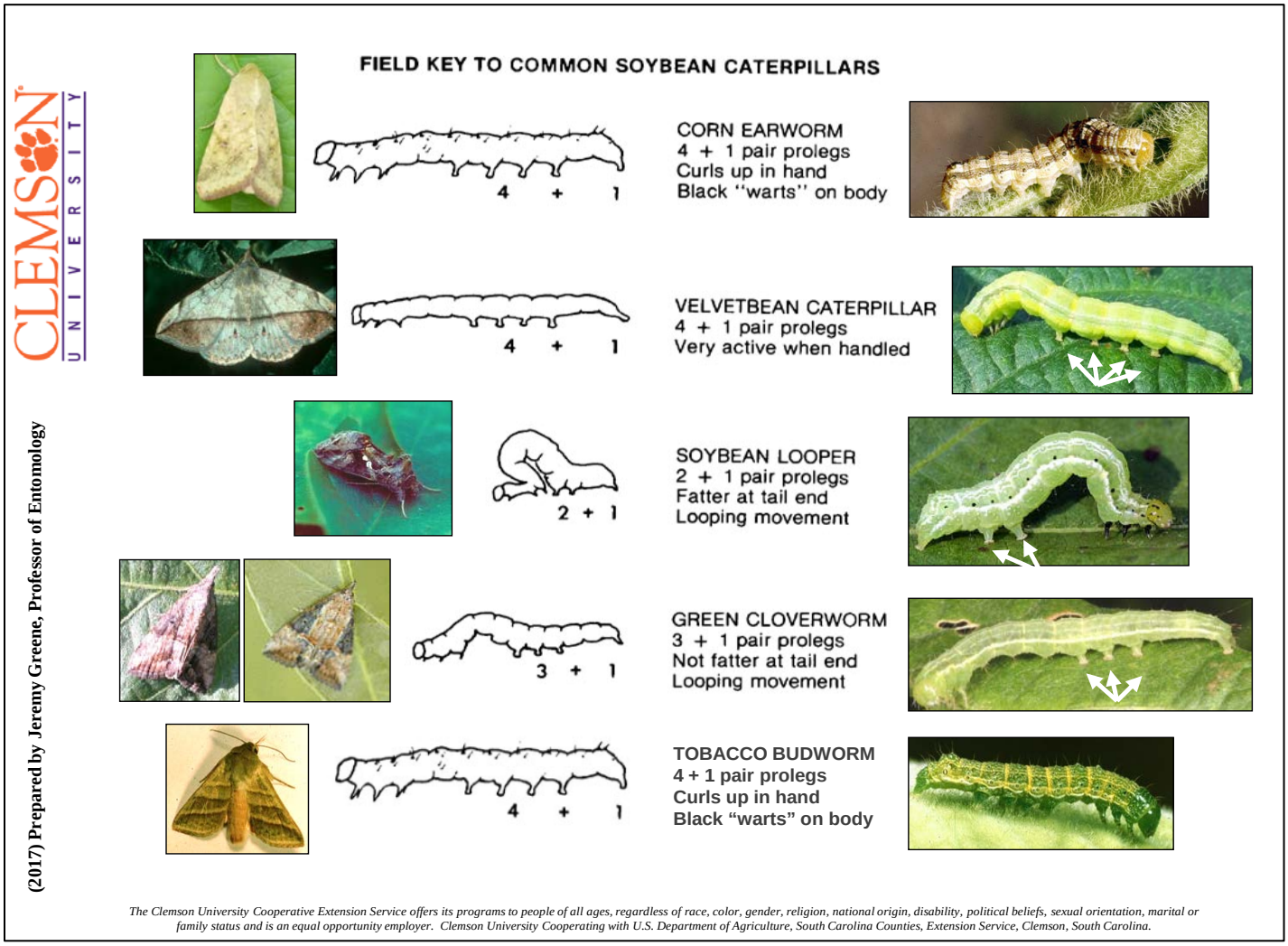
As of 22 July 2018, the USDA NASS South Carolina Statistical Office estimated that about 20% of the crop is blooming, compared with 10% the previous week, 31% at this time last year, and 28% for the 5-year average. The condition of the crop was described as 2% excellent, 77% good, 19% fair, 2% poor, and 0% very poor. These are observed/perceived state-wide averages.



Soybean Insects

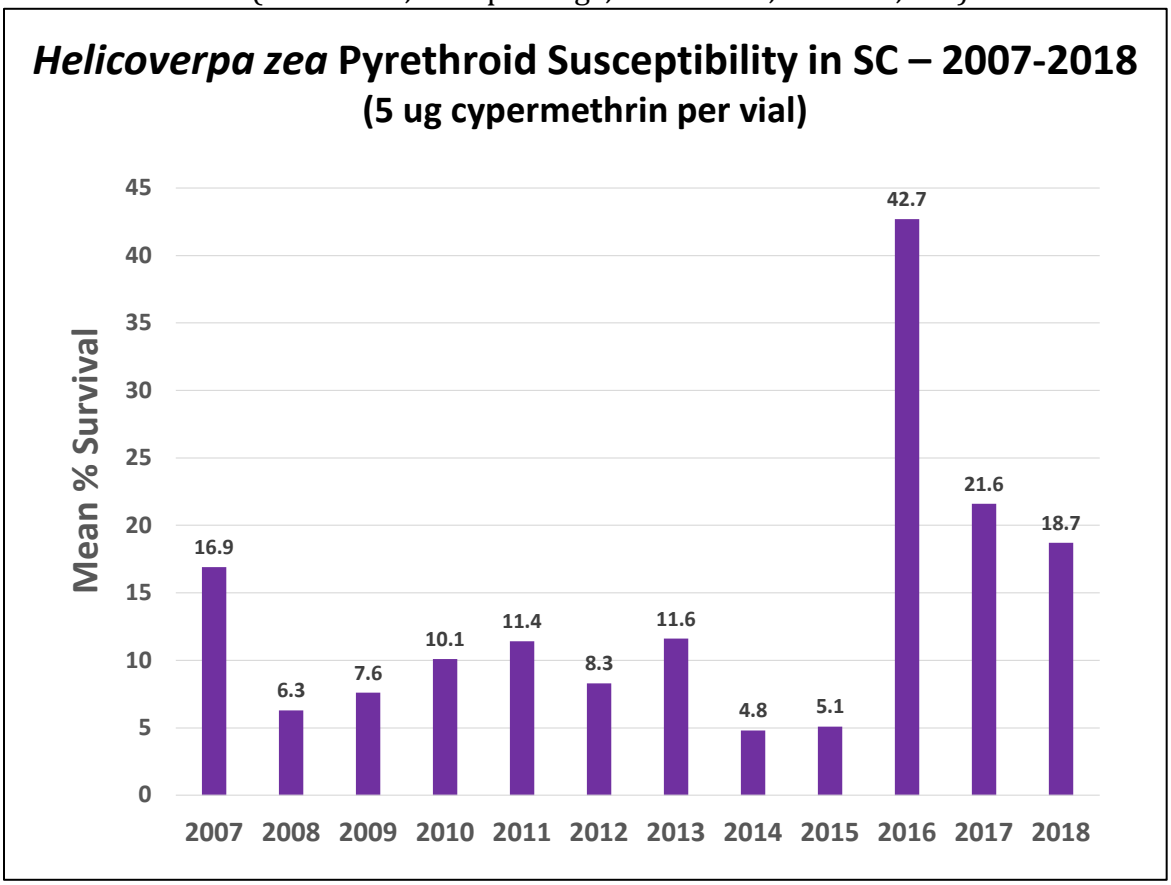
The report is the same as last week – there are numerous species of insects in soybeans right now, but I have heard of no problems with any one species. This can change quickly. I still think that we could deal with heavy insect infestations in soybeans in August, especially on late-planted. We have stink bugs and soybean loopers already in

vegetative stage soybeans, both usually pests later in the season. There are many podworm (same species as corn earworm and bollworm) and tobacco budworm moths flying now, as captures in my pheromone traps continue to climb (see chart later in newsletter). Both species can be an issue in soybeans, so pay attention to the moths you see flying around. Use the guide below to hone your skills at identifying moths and larvae for the major species you will see in soybeans. Remember, your choice of insecticide depends on proper identification of species. Use this pictorial key to help with those identifications.



Bioassay Results for Pyrethroid Efficacy on H. zea

We have been testing the susceptibility of *Helicoverpa zea* (bollworm, corn earworm, podworm, etc.) to a pyrethroid insecticide in a laboratory bioassay using a coated glass vial technique since 2007. This test has allowed us to montior any change in susceptibility over time, so it is labeled a 'resistance monitoring' method. The test is only designed to measure change in susceptibility over time for the population of moths sampled. However, the results from this testing method were used to document resistance developing in tobacco budworm that also appeared in field failures. We have observed problems in the field in selected populations of bollworm over the years, but failures with pyrethroids have not been widespread. The charted data below illustrate that we are observing decreased susceptibility of bollworm to a pyrethroid insecticide over time. We will have to see what happens in the field. Although we saw high average survival in 2016, that declined in 2017, and the trend so far this year is also down. For now, I think we are generally okay with pyrethroids providing fair-to-acceptable control of bollworm (podworm in soybeans), but we need to spray the smallest caterpillars we can. We need to tread cautiously, though, and watch those treatments carefully. We could be seeing the beginning of the end for pyrethroids controlling bollworm, if this trend continues. They have already lost control of bollworm with pyrethroids in the midsouthern states, where insect control programs have been historically aggressive. Other materials (Prevathon, Intrepid Edge, Blackhawk, Steward, etc.) are alternatives.



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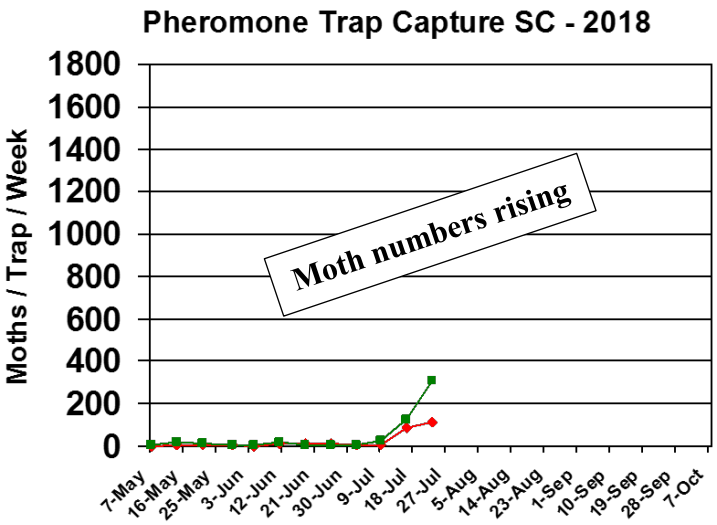
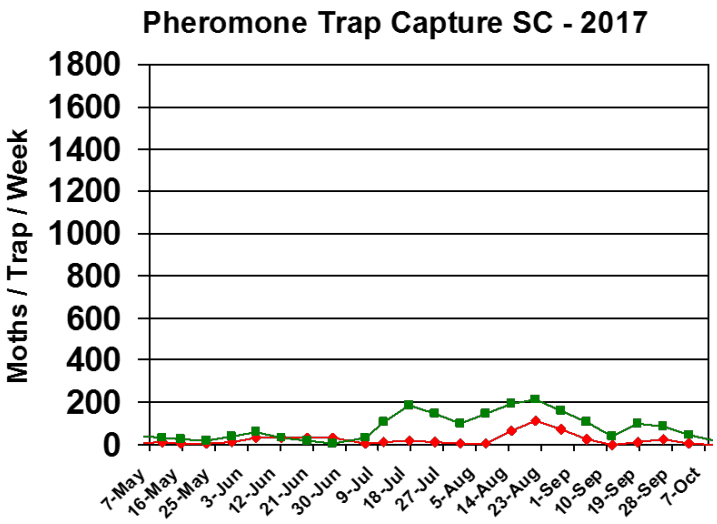
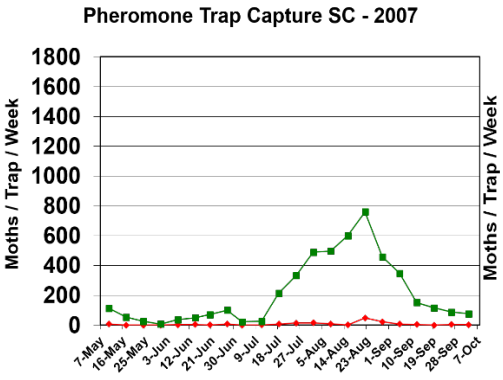
Bollworm & Tobacco Budworm

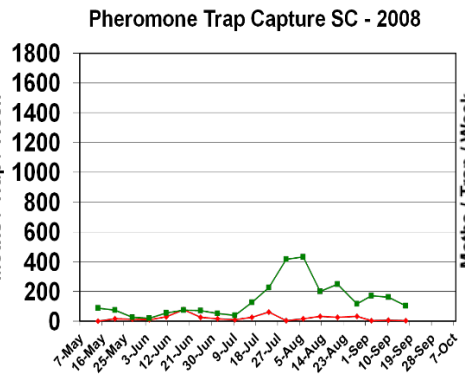
Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2017 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state.

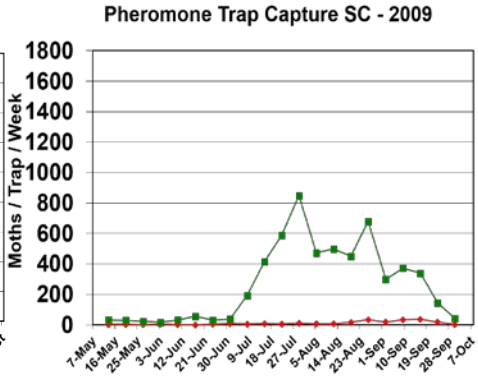


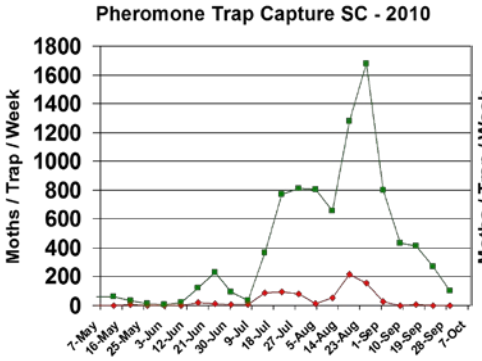


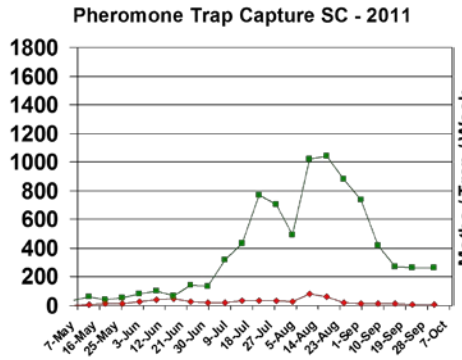
Trap data from 2007-2016 are shown below for reference to other years of trapping data from EREC:

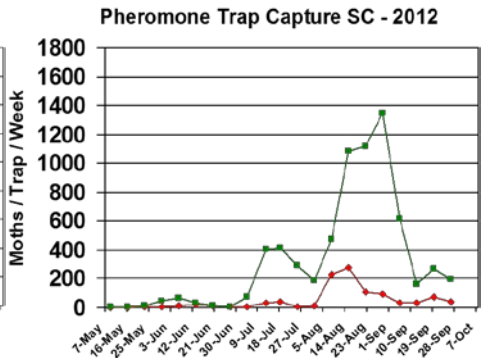


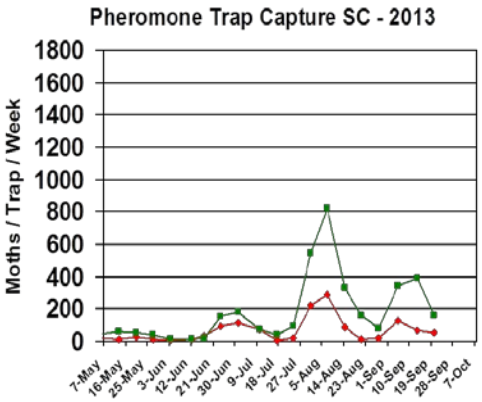


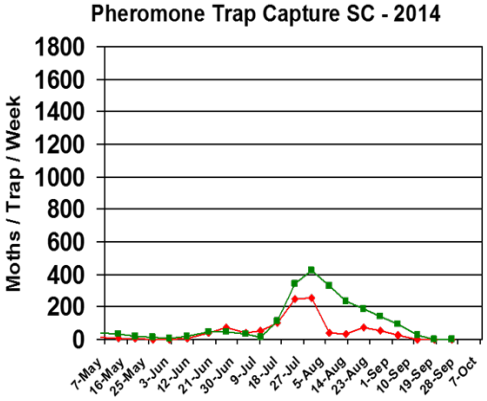


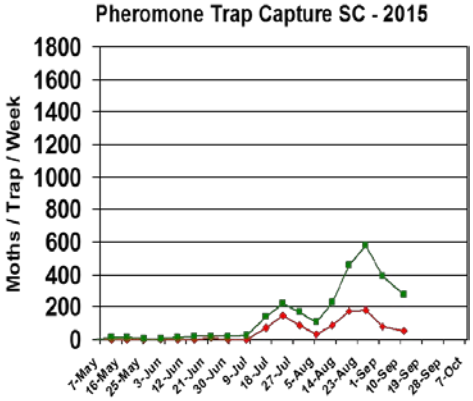


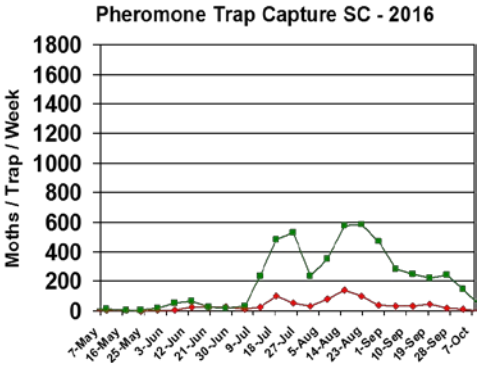








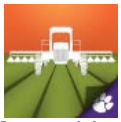




Pest Management Handbook – 2018

Insect control recommendations are available online in the 2018 South Carolina Pest Management Handbook at: http://www.clemson.edu/extension/agronomy/pest%20management%20handbook.html

Free Mobile Apps: "Calibrate My Sprayer" and "Mix My Sprayer"



Download our free mobile apps called "Calibrate My Sprayer" and "Mix My Sprayer" that help check for proper calibration of spraying equipment and help you with mixing user-defined pesticides, respectively, in custom units (available in both iOS and Android formats):
http://www.clemson.edu/extension/mobile-apps/

Need More Information?

For more Clemson University Extension information: http://www.clemson.edu/extension/

For historical cotton/soybean insect newsletters:
http://www.clemson.edu//extension/agronomy/cotton1/newsletters.html

Sincerely,

Jeremy K. Greene, Ph.D.
Professor of Entomology

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